

REMARKS

With claims 1-4, 7-16, 18-21 and 23-35 previously pending, with this amendment claims 19-21 and 23-24 have been cancelled, while claims 1, 8, 11-12, 15-16, 25-26, 28-31 and 35 have been amended as described below. Further, the specification has been amended as described below.

Specification Objection

The Specification is objected to because in paragraph 0044 on page 17, in line 12, “the spindle coil 8 resistance ...” is cited, but in Fig. 8 the spindle coil is not shown with a resistance 8. In response, applicant has amended the Specification to refer to the coil resistances 63-65 as shown in Fig. 2. Accordingly, Applicant respectfully requests that the objection to the specification be withdrawn.

Claim Objection

Claims 21 stands objected to because for informalities identified in the Office Action. Claim 21 has been cancelled rendering this objection moot.

Section 103 Rejections

Claims 1, 7, 19 and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schirle (6,055,120). Claims 19 and 23 have been cancelled rendering this rejection moot with respect to those claims. Based on the amendments to claim 1, this rejection is believed to be overcome with respect to claims 1 and 7.

Claim 1 has been amended to recite “a processor configured to determine spin-up parameters of the spindle motor based on a temperature of the VCM, the processor further being configured to send a signal to vary the spin-up parameters of the spindle motor based on the temperature of the VCM.” Schirle does not disclose varying spin-up parameters based on temperature. Instead, Schirle only determines a start-up failure time based on the temperature (see Schirle col. 4, lines 35-65 as cited in paragraph 1 of Office Action). The spin-up parameters of the spindle motor remain unchanged irrespective of temperature change. Applicant’s specification paragraphs 41-45 disclose how spin-up parameters are varied with temperature, separate from a failure or shut-down time out period.

The Office Action states in paragraph 4, as well as paragraph 1 relating to Applicant’s previous remarks, that in Schirle “Specifically, the detected temperature ‘sets’ a time-out period; the processor determines the spin-up parameter, speed, based on the set time-out period, and the speed parameter is determined by the voltage across the motor (voltage parameter during spin-up to “normal” speed,” referencing Schirle Fig. 2, #28; Fig. 3, #71; col. 4, II. 35-65). However, col. 4, lines 35-65 disclose no more than setting the time-out period (or failure time) based on temperature change. See col. 4, line 50. Schirle does not disclose using temperature to vary spin-up parameters, where the spin-up parameters include “a. spin-up current; b. spin-up voltage; and c. commutation time,” as claimed in claim 1. Accordingly claim 1 is now believed patentable as non-obvious over Schirle.

Claim 7 is believed allowable as non-obvious over Schirle based at least on its dependence on claim 1.

Claims 2-4 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schirle and further in view of Wallis (5,268,804). Claim 20 has been cancelled rendering this amendment moot with respect to claim 20. Claims 2-4 are believed allowable based at least on their dependency on claim 1.

Claims 8-11, 24, 31 and 35 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schirle and further in view of Wallis. Claim 24 has been cancelled rendering this amendment moot with respect to claim 20. Claim 31 has been amended to be dependent on claim 25, which is indicated by under paragraph 8 of the Office Action as allowable. Based on the amendments to claims 8 and 35, the remaining claims 8-11 and 35 are now believed allowable as detailed to follow.

Similar to claim 1, claims 8 and 35 have been amended to claim varying the rate of spin-up of the spindle motor during startup. As indicated with respect to claim 1 above, Schirle does not disclose varying spin-up parameters based on temperature. Instead, Schirle only determines a time out period after start-up based on the temperature (see Schirle col. 4, lines 35-65 as cited in paragraph 1 of Office Action). Wallis does not further disclose varying the rate of spin-up of the spindle motor. Accordingly claims 8 and 35 are believed allowable as non-obvious over Schirle in view of Wallis.

The remaining claims 9-11 are believed allowable over Schirle in view of Wallis based at least on their dependence on claim 1.

Claims 12-16, 18 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schirle and further in view of Wallis. Claim 21 has been cancelled rendering this amendment moot with respect to claim 20. Based on the amendments to claim 12, the remaining claims 12-16, 18 and 12 are now believed allowable as detailed to follow.

Similar to claim 1, claim 12 has been amended to claim sending a signal to vary the spin-up parameters of the spindle motor wherein the parameters comprise one of “a. spin-up current; b. spin-up voltage; and c. commutation time” during startup. As indicated with respect to claim 1 above, Schirle does not disclose varying any of these spin-up parameters based on temperature, but instead only determines a time out period. Wallis does not further disclose varying any of the claimed spin-up parameters. Accordingly claim 12 is believed allowable as non-obvious over Schirle in view of Wallis.

The remaining claims 13-16 and 18 are believed allowable over Schirle in view of Wallis based at least on their dependence on claim 1.

Allowable Subject Matter

Claims 32-34 are indicated as being allowed.

Claims 25-31 are indicated as being allowable if rewritten in independent form. Accordingly, claims 25 and 26 have been rewritten in independent form and are now believed in condition for allowance. Claims 27-31 are believed allowable in dependent form based on their dependence on now allowable claim 25.

Conclusion

In light of the above amendments and remarks, claims 1-4, 7-16, 18 and 25-35 are all believed in condition for allowance. Accordingly, reconsideration and allowance of these claims is respectfully requested.

No fee is believed due with this response. Should a fee be due, the Commissioner is authorized to charge any underpayment to Deposit Account No. 06-1325.

Respectfully submitted,

Date: May 10, 2005

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